AMENDMENT AND RESPONSE UNDER 37 CFR § 1.111

Serial Number: 09/346283

Filing Date: July 1, 1999

Title: INTEGRATED CIRCUIT WITH UNIFIED INPUT DEVICE, MICROPROCESSOR AND DISPLAY SYSTEMS

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## IN THE CLAIMS

## Please amend the claims as follows:

- An integrated circuit with a micromechanical element (Currently Amended) 1. comprising a semiconductor support substrate supporting a micromechanical sensor element, a logic circuit and a semiconductor visual display element, the sensor element electrically connected to the logic circuit, and the logic circuit being electrically connected to the semiconductor visual display element.
- The integrated circuit of claim 1 wherein said semiconductor display 2. (Original) element comprises an array of light-emitting pn junctions.
- The integrated circuit of claim 2 wherein said light-emitting pn junctions 3. (Original) comprise GaAs light-emitting pn junctions.
- The integrated circuit of claim 1 wherein said visual (Previously Amended) 4. display element comprises an array of semiconductor pixels having pitch dimensions of less than 20 micrometers.
- The integrated circuit of claim 2 wherein said visual (Previously Amended) 5. display element comprises an array of semiconductor pixels having pitch dimensions of less than 20 micrometers.
- The integrated circuit of claim 3 wherein said visual (Previously Amended) 6. display element comprises an array of semiconductor pixels having pitch dimensions of less than 20 micrometers.

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7. (Original) The integrated circuit of claim 1 wherein said sensor element is selected from the group consisting of strain gauges, thermal gauges, radiation gauges, and chemically responsive gauges.

## 8-11. (Withdrawn)

- 12. (New) An integrated circuit with a micromechanical element comprising a semiconductor support substrate supporting a moveable micromechanical sensor element, a logic circuit and a semiconductor light emitting visual display element, the moveable micromechanical sensor element electrically connected to the logic circuit, and the logic circuit being electrically connected to the semiconductor light emitting visual display element.
- 13. (New) An integrated circuit provided on a substrate with a unified input element and display element, the integrated circuit comprising:

an input element;

a logic circuit configured on the substrate and electrically connected to the input element; and

an output element, the logic circuit being electrically connected to the output element;

wherein the output element is a semiconductor visual display element.

- 14. (New) The integrated circuit of claim 13, further comprising: a semiconductor support substrate supporting the input element.
- 15. (New) The integrated circuit of claim 14, wherein the input element is a micromechanical sensor element.
- 16. (New) The integrated circuit of claim 14, wherein the input element is selected from a group consisting of an inertial sensor and an accelerometer.

Cont

- 17. (New) The integrated circuit of claim 14, wherein the input element is selected from a group consisting of a strain gauge, a thermal gauge, a radiation gauge, and a chemically responsive gauge.
- 18. (New) The integrated circuit of claim 15, wherein the micromechanical sensor element is configured to generate an electrical signal in response to an environmental or conditional change.
- 19. (New) The integrated circuit of claim 18, wherein the output element is an array comprising pixels of less than 25 micrometers.
- 20. (New) The integrated circuit of claim 18, wherein the output element is an array comprising pixels configured to display alphanumeric characters.
- 21. (New) The integrated circuit of claim 20 wherein the input element is a first input element, the integrated circuit further comprising:

  a second input element.

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